

Facilitation of Environmental Decision Making by a Remote Coastal First Nation Community

Ananthan Suppiah, Brenda Maguir and Robyn Weisner

First Nations' Emergency Services Society

Abstract

First Nations people comprise approximately 3 percent of British Columbia's total population. About 56,000 First Nations people live in some 300 reserve communities, which make up 199 'Bands'. This includes remote, isolated communities along the coast, where the development of a proper system for the collection, transportation and disposal of solid wastes has been impeded due to factors such as the lack of road access, available land, trained operators & maintenance personnel, and the high cost of long-haul barge transport. The resulting solution was a patchwork of unsustainable disposal methods including open burning, dumping, and in some cases, incineration. These 'solutions' were developed in isolation of what was happening in the neighbouring communities, both aboriginal and non-aboriginal.

This paper outlines a different approach to solid waste management planning that is being encouraged by the First Nations' Emergency Services Society (FNESS), an organisation that provides essential services to First Nation communities in British Columbia. This 'big-picture' approach is based on:

- Integration of collection and transportation services to a number of such communities.
- Integration with the regional solid waste management plans.
- Community education in appropriate disposal options and waste reduction.
- Participation of an informed community in decision-making.

Our case study, demonstrating this approach, will be based on a First Nation Band located on the west coast of Vancouver Island. One of the 'reserves' is located on a small island, which has a dumpsite that has been used by the community for more than 30 years. This dumpsite is an environmental and safety concern for the band and they would like to find a solution. The community was kept informed of the work done by a consultant company during their investigation of the environmental impacts of the current dumpsite. Band members were then asked to participate in the decision-making process as a solution was developed for this dumpsite.

Past projects with First Nations communities have shown that community involvement is a critical factor in a project's success. When a community takes ownership of a project, the resulting solution is likely to be effective and long-lasting. The purpose of this paper is to share the results of a process that facilitated active community-wide involvement in decision making in a remote First Nation community located on the west coast of Vancouver Island. The village is only accessible by boat or seaplane. Its 175 residents have major health and safety concerns about their active dumpsite located approximately 250 metres from the nearest home and 30 metres from the shoreline. The 40-metre-by-25-metre site has been in operation for the last 25 to 30 years, receiving a variety of domestic and bulky waste such as broken appliances. The garbage is collected from each household on a weekly basis and taken by wheelbarrow up to the dumpsite.

The village is located in the Coastal Western Hemlock biogeoclimatic zone. This zone is characterised by a mild, wet climate and is commonly referred to as a temperate rain forest. The average annual precipitation is approximately 3,260 millimetres. The potential for leachate generation and its impact on the environment and human health was a concern. Closure of the site was a high priority for the community.

Two viable options for decommissioning the dumpsite were:

- The excavation and removal of all the deposited waste by barge to a regional disposal facility.
- The engineered closure of the dumpsite.

The decision-making process was impeded by a lack of information. A screening-level assessment of human health and ecological risk of the existing site and a feasibility study of both options was conducted. The objective was to collect information that would permit the evaluation of both options, based on human health and safety, environmental, engineering and socio-economic considerations.



Photo 1: Section of village dumpsite.

The results showed that water quality downgradient of the site was characteristic of a weak landfill leachate. The concentration of leachate indicator parameters were found to be low, likely as a result of the small size of the dumpsite and the diluting effect of the high levels of annual precipitation in the area. The primary health and safety concern of the community was related to the unrestricted access to the dumpsite. Domestic animals and wildlife were also identified to be at risk for disease transmission and there was concern of domestic animals acting as vectors for disease transmission to residents. The results of this preliminary assessment suggested that both options were feasible based on human health and environmental considerations.

First Nations' Emergency Services Society (FNESS) facilitated a community-driven decision making process that allowed the community to participate and select the option that best reflected their interest. This process included:

- Two community meetings attended by chief and council.
- A "door to door" initiative to obtain input from residents who did not come to the community meetings.
- The hiring of a First Nations student to act as a liaison between the consultants and the community during the field investigations.
- The participation of community members in field investigation work.

The following eight criteria for the evaluation of the two options were developed at the first community meeting:

1. Long-term Improvement to Health and Safety
2. Employment for Community Members
3. Long-term Improvement to the Environment
4. Long-Term Costs
5. Time that the Project is Conducted
6. Short-Term Costs
7. Negative Construction-Related Impacts
8. Negative Impacts to People Outside the Community

The relative importance, or "weight," of each criterion was determined with equal importance given to the input obtained from community meetings attended by Chief and Council and from the door-to-door survey of residents. The results obtained from the first community meeting and the door-to-door survey were remarkably similar. The top three criteria in order of importance from both these initiatives were Long-term Improvement to Health and Safety; Employment for Community Members; and Long-term Improvement to the Environment.

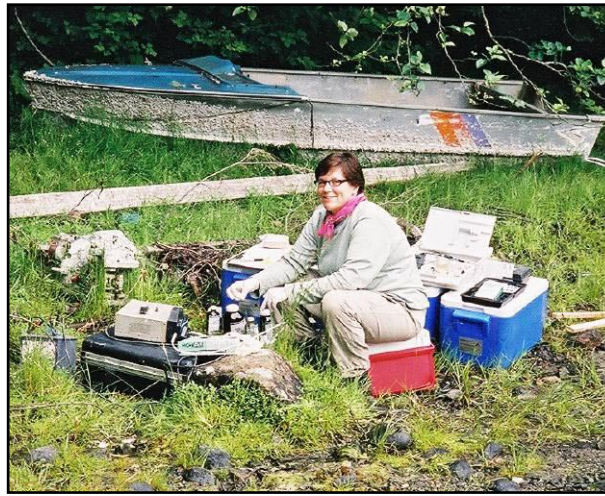


Photo 2. First Nations summer student conducting field investigation work.

Engineered closure of the dumpsite was identified as the preferred option, based on the community's input and the preliminary assessments. The selection of this option was endorsed by the community at a second community-wide meeting attended by chief and council, which provided an opportunity for the community to review the results and provide further input.

In conclusion, a First Nations community participated and took ownership of a process that helped them decide the best way to decommission their dumpsite and address one of the key health and safety concerns in their community. The additional cost to facilitate active community participation in this project was estimated to be \$5,000, or 7% of the overall cost of the project. This project was managed by FNESS and implemented with funding from the Department of Indian Affairs and Northern Development.